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DOMINION OF CANADA—DEPARTMENT OF AGRICULTURE

An Economic Study of Cheese Consumption In Certain Urban and Rural Districts of Canada

G. P. Boucher and W. C. Hopper

MARKETING SERVICE
ECONOMICS DIVISION



Agriculture and
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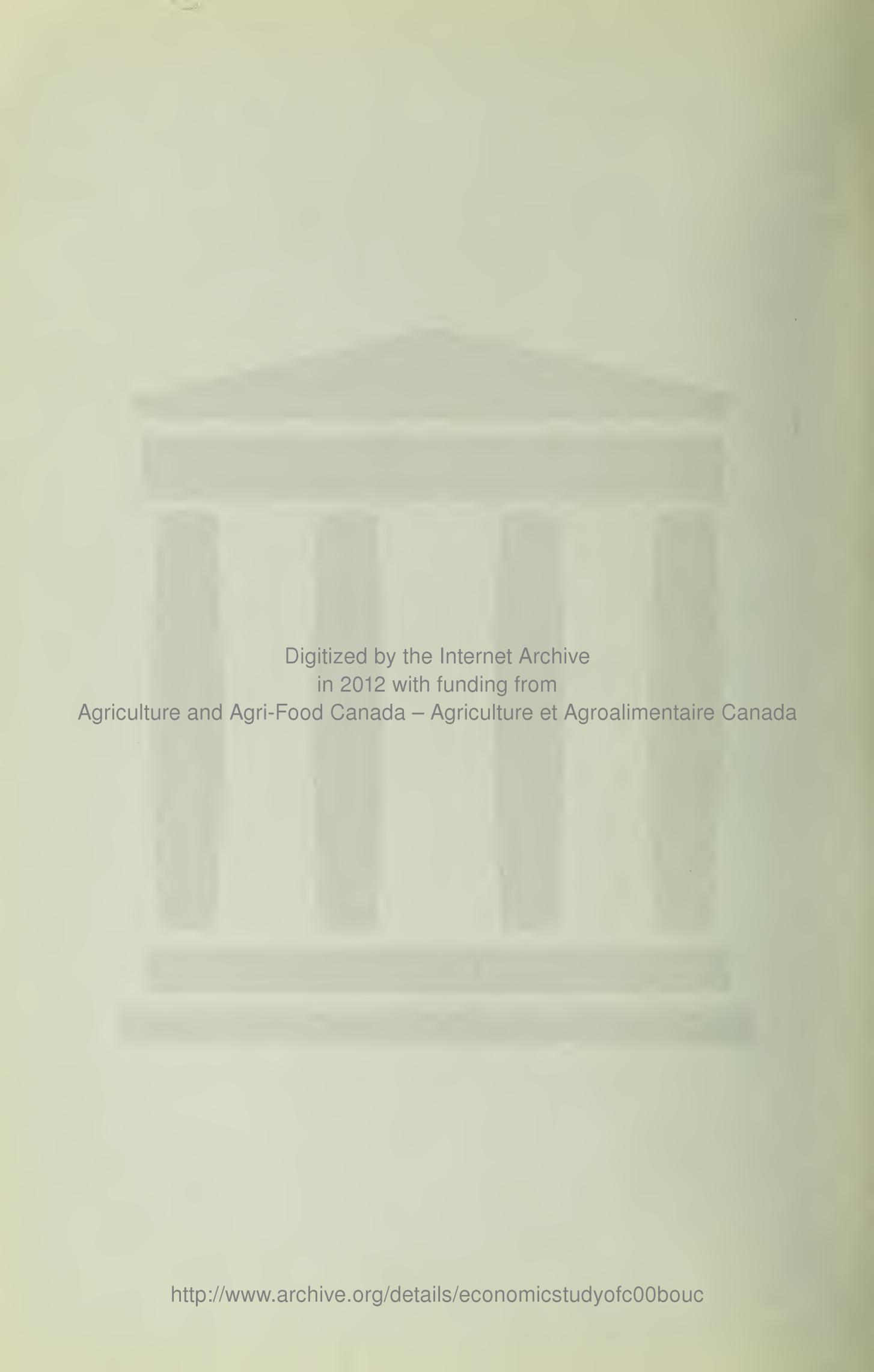
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AN ECONOMIC STUDY OF CHEESE CONSUMPTION IN CERTAIN URBAN AND RURAL DISTRICTS OF CANADA

G. P. BOUCHER AND W. C. HOPPER

INTRODUCTION

In this bulletin the results of a study of cheese consumption in certain sections of Canada are presented. Significant variations, which appear to be related to differences in location, income, nationality and other factors, are indicated. The project was conducted by the Economics Division of the Marketing Service, Dominion Department of Agriculture. The Rural Economics Service of the Quebec Department of Agriculture assisted in that part of the study conducted in the province of Quebec.

Up to a few years ago marketing research gave greater emphasis to the study of the supply than of the demand side of the market. In such an approach the market economist had to assume that demand was constant. But this is not the case in actual experience. Changes in demand are very frequent and this has been particularly true in recent years.

Production being the first phase in the life of economic goods, the producer as well as the distributor should make inquiries with respect to the demand for such goods. It will readily be admitted that a sound production program must be based on a full and reliable knowledge of the demand for the product in question. Consequently, improvement in agricultural production depends in a large measure on a sound marketing program which in turn cannot be obtained without a knowledge of the demand for farm products. The improvement of the financial position of the dairy farmer in this country calls for a close scrutiny of the methods employed in the production and marketing of dairy products.

Purpose of the study.—The study was prompted by the fact that the consumption of cheese in Canada is low when compared with that of other countries and that little knowledge existed with respect to the variations in consumption of different kinds of cheese in the various parts of Canada. It was felt that more should be known concerning the factors affecting cheese consumption. Among such factors, locality, income, nationality, and taste were considered as likely to be important. Since many economists consider the family unit to be the real consuming unit, information was obtained, and is presented on this basis as well as on the usual per capita basis.

Method Used.—Housewives were interviewed and questionnaires completed during the summer of 1935 by enumerators who called at their homes. Information was obtained from 3,213 families. Great care was taken to obtain a representative sample of the various localities in which the study was conducted.

Areas Surveyed.—The survey was conducted in the three provinces of Ontario, Quebec, and Alberta. Cities, villages and farm areas were surveyed in each of these provinces. The three cities selected were Oshawa, in the province of Ontario; Quebec City, in the province of Quebec; and Calgary, in the

province of Alberta. The three villages selected were Uxbridge, in the province of Ontario; St. Romuald, in the province of Quebec; and Claresholm, in the province of Alberta.

The authors wish to acknowledge the assistance of the following members of the Agricultural Economics Division, who helped with the field work: C. V. Parker, G. H. Craig, and Miss B. E. Shuart. The latter also assisted with the statistical analysis. Mr. G. Michaud, of the Rural Economics Service, Quebec, took part in the conduct of the field work in the province of Quebec.

GENERAL CONSIDERATIONS

While this bulletin is concerned primarily with the consumption of cheese in various localities of Canada, it has been considered advisable to present some figures indicating the rates of consumption in other countries. From table 1 it may be seen that Empire countries have much lower rates of consumption of cheese than all foreign countries listed with the exception of Argentina. Since 1930, Canada has had the lowest rate of consumption of any Empire country. It is also interesting to note that the "apparent consumption per head in the United Kingdom, though less than in European countries, is much higher than in other Empire countries."¹ The apparent consumption in the United States does not differ materially from that of most Empire countries except the United Kingdom.

The figures relate only to the apparent consumption of cheese. They show not only that the annual consumption per head of cheese in Canada is slightly lower than in other Empire countries but that it is decidedly below that of most European countries. Later in the study tables will be found of consumption in Canada by persons of various racial origin.

TABLE I.—Estimated Annual Per Capita Consumption of Cheese in Certain Countries

Country	1930	1931	1932	1933	1934	1935	1936
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
<i>Empire Countries—</i>							
United Kingdom.....	9.8	(a)	(a)	(a)	9.4	9.1	8.8
Australia ¹	3.8	3.7	3.8	4.4	3.5	3.8	(a)
Canada.....	3.6	3.5	3.3	3.4	3.6	3.6	3.4
Union of South Africa ²	4.5	4.4	3.9	3.7	3.8	4.0	4.8
Southern Rhodesia ³	(a)	(a)	5.0	4.8	5.2	5.7	5.3
<i>Foreign Countries—</i>							
United States of America.....	4.6	4.5	4.4	4.5	4.8	5.2	5.4
Denmark.....	11.7	13.2	10.8	10.8	12.8	13.4	14.1
France.....	(a)	11.2	11.1	11.0	10.8	12.7	12.3
Netherlands.....	12.2	12.9	11.5	15.4	14.7	14.7	16.7
Germany.....	12.3	11.9	11.4	11.7	10.8	10.8	12.3
Argentina.....	3.2	2.9	3.4	4.1	3.8	3.8	4.9
Switzerland.....	16.7	17.2	17.4	17.8	17.8	18.0	18.5

¹Twelve months ending 30th June of following year.

²Twelve months ending 31st August; Europeans only.

³Non-natives only.

(a) Details not available.

Source: *Dairy Produce*, published by the Intelligence Branch of the Imperial Economic Committee, London, 1937.

Although the annual per capita consumption of cheese in Canada is low, the consumption of the three main dairy products, cheese, butter and milk, when brought to a milk equivalent is among the highest in the world. This is shown in table 2. The comparatively large consumption of milk and butter in Canada may explain to a certain extent the low consumption of cheese.

¹ Dairy Produce Publication of the Intelligence Branch of the Imperial Economic Committee, London, 1937.

TABLE 2.—Annual Per Capita Consumption of Cheese, Butter, and Whole Milk in Certain Countries

Country	Per capita consumption						Milk equivalent ¹			
	Cheese		Butter		Whole Milk		Cheese	Butter	Whole Milk	Total ²
	Year	Lb.	Year	Lb.	Year	Lb.	Lb.	Lb.	Lb.	Lb.
Switzerland.....	1930	16.1	1930	13.4	1927	70.4	161	282	605	1,048
Netherlands.....	1930	14.3	1930	19.6	1929	42.7	143	412	367	922
Denmark.....	1931	13.1	1931	14.6	1927	22.0	131	307	189	627
Italy.....	1928	12.1	1928	2.8	1913	4.2	121	59	(³)	(³)
Norway.....	1929	10.8	1927	9.6	1927	56.0	108	201	482	791
Germany.....	1928	10.6	1928	16.5	1930	24.0	106	347	206	659
France.....	1931	10.5	1931	8.5	1931	29.5	105	178	254	537
Sweden.....	1929	10.2	1928	16.5	1914	69.7	102	346	(³)	(³)
Great Britain.....	1930	8.5	1933	23.5	1932	25.0	85	494	215	794
New Zealand.....	1930	4.8	1930	36.2	1927	37.4	48	760	322	1,130
United States.....	1932	4.4	1932	18.1	1932	40.0	44	380	344	768
Australia.....	1930	4.3	1930	29.8	1926	37.1	43	626	319	988
Canada.....	1930	3.7	1930	30.3	1929	54.7	37	636	470	1,143

¹The following conversion factors were used:—

1 lb. of cheese—10 lb. milk;
1 lb. of butter—21 lb. milk;
1 gallon milk—8.6 pounds.

²This total includes only cheese, butter, and whole milk, it does not include other dairy products.

³Data not available.

Source: Research Bulletin 128, *Consumer Preferences for Cheese*, published in October 1935 by the Agricultural Experiment Station of the University of Wisconsin at Madison.

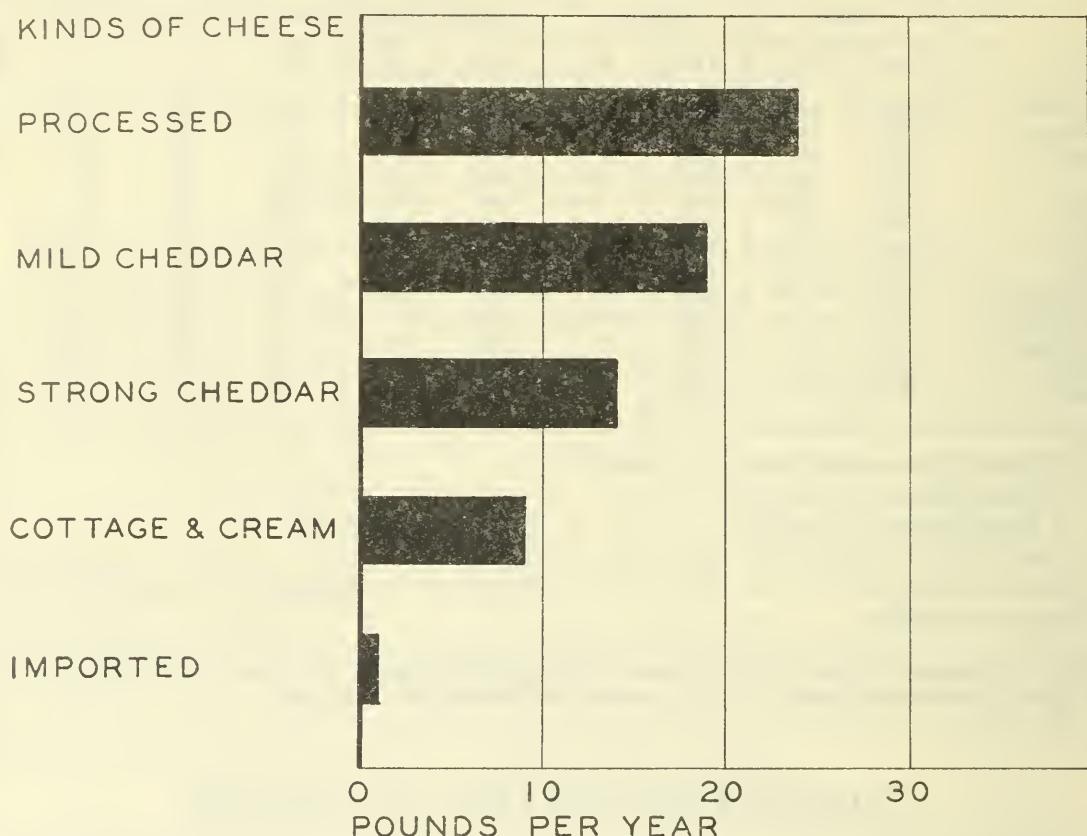
CHEESE CONSUMPTION IN CANADA

The average per capita consumption of all types of cheese for the 3,213 families included in the study was 6.7 pounds.¹ Three hundred and fifty-two of the families reported that no cheese was used in the home and of this number 260 families were in the province of Quebec.

Processed cheese was consumed to a larger extent than any other kind. However, if the quantities of mild and strong Canadian cheddar cheese are added together, the per capita consumption of this was found to be greater than that of processed cheese (figure 1).

¹ This average figure for per capita consumption of cheese is considerably larger than the average for Canada as reported by the Dominion Bureau of Statistics. It is probable that as in most cases cheese is not purchased regularly, housewives over-estimated their purchases when giving information to enumerators. An attempt was made to determine the extent of these over-statements of purchases. Actual purchases of cheese by fifty representative families, as revealed by charge accounts of a retail store were obtained in Oshawa, which showed the per capita consumption to be 6.9 pounds. (See *Economic Annalist*, Volume VI, No. 6, December, 1936, page nine). This figure is somewhat lower than the figures for Oshawa as shown in table 3. No information on charge account purchases could be obtained in Quebec city, but purchases of 42 French-Canadian families on charge accounts of retail stores in Montreal were obtained which showed the per capita consumption to be 5.6 pounds; this figure is actually higher than the average given in table 3 for Quebec city, where the information was taken largely from French-Canadian families. Neither cream nor cottage cheese which were consumed in considerable quantities by certain families, and which are included in the figures given for this survey, are included in the average for Canada as reported by the Dominion Bureau of Statistics. This would tend to raise the average of the survey figures above the figures for Canada. It must be remembered, too, that only families in certain localities of Canada were covered by the survey reported herein. Probably many areas of Canada not included in the survey have a much smaller per capita consumption of cheese than those which were studied. Support is given to this opinion by the fact that the consumption of cheese in the Quebec rural non-cheese-producing area was only 2.1 pounds per capita, which is only about one-half the reported average for Canada.

FIGURE 1: AVERAGE PER CAPITA CONSUMPTION OF VARIOUS KINDS OF CHEESE PER YEAR IN CERTAIN LOCALITIES OF CANADA.



The consumption of new or mild Canadian cheese was found to be larger than the consumption of old or strong Canadian cheddar, but the figures for strong Canadian cheddar are larger than existing information on total sales of strong cheese would seem to warrant. This probably indicates a lack of knowledge by consumers of what constitutes old or strong cheese as compared with new or mild cheese.

In table 3 the consumption on a family base and also on a per capita base for the various areas studied is shown.

TABLE 3.—Relation of Locality to Annual Consumption of Cheese in Certain Urban and Rural Areas of Canada, 1935

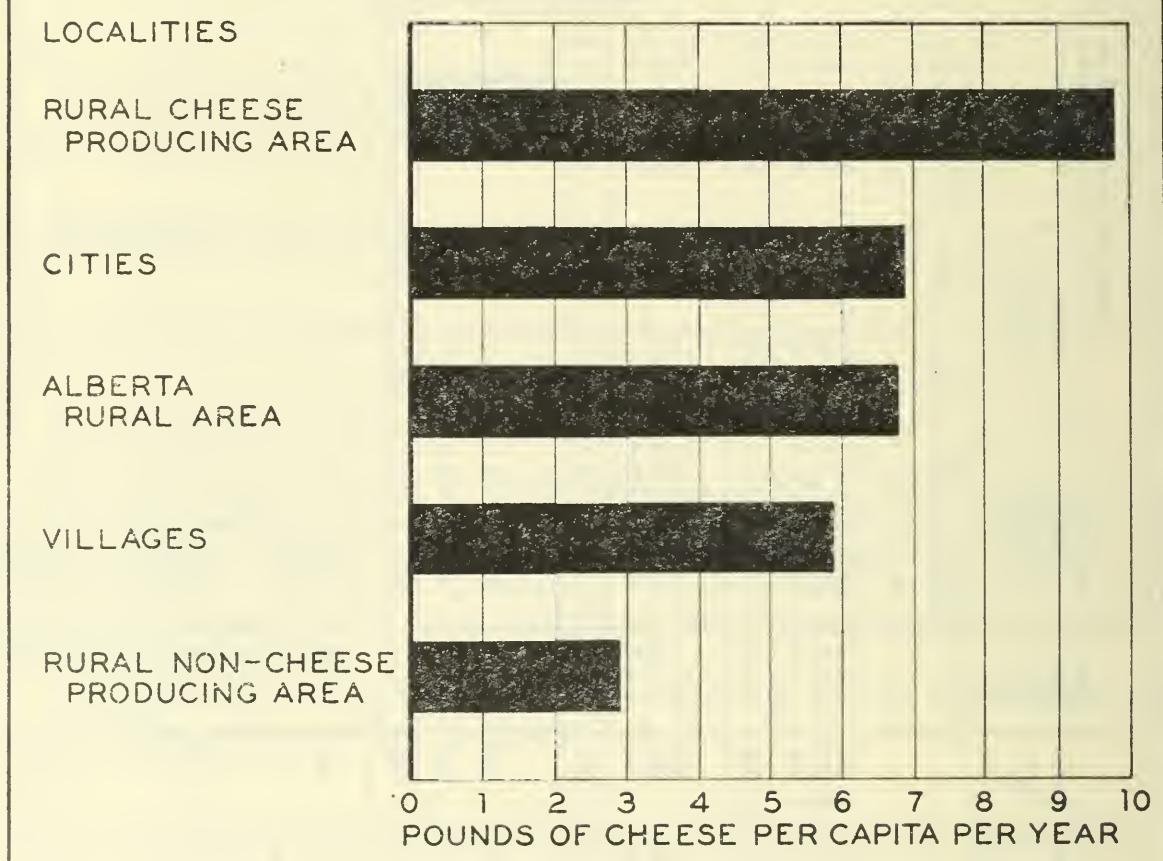
Locality	Number of families	Number of persons	Average number of persons	Average per family and per capita consumption of cheese								Total	
				Mild Canadian Cheddar		Strong Canadian Cheddar		1Cottage and Cream		Processed			
				Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita		
<i>Cities</i>				lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	
Oshawa.....	816	3,365	4.1	10.1	2.5	8.9	2.2	5.7	1.4	10.2	0.3	35.3	
Quebec City.....	790	4,686	5.9	6.8	1.1	4.3	0.7	2.8	0.5	15.9	0.1	30.8	
Calgary.....	996	3,995	4.0	8.5	2.1	6.5	1.6	5.2	1.3	9.4	0.7	30.2	
Totals and averages for cities.....	2,602	12,046	4.6	8.5	1.8	6.6	1.4	4.6	1.0	11.6	2.5	0.6	
<i>Villages</i>													
Uxbridge.....	102	345	3.4	7.8	2.3	9.7	2.9	0.4	0.1	6.3	1.9	0.05	
St. Romuald.....	48	287	6.0	5.6	0.9	3.9	0.7	0.3	0.1	11.2	1.9	0.01	
Claresholm.....	101	432	4.3	11.8	2.8	4.8	1.1	2.1	0.5	9.1	2.1	.....
Totals and averages for villages.....	251	1,064	4.2	9.0	2.1	6.6	1.6	1.0	0.2	8.3	2.0	.....
<i>Farm Areas</i>													
Ontario rural cheese producing area.....	50	222	4.4	29.8	6.7	21.9	4.9	.....	.....	1.9	0.4	.....
Quebec rural cheese producing area.....	49	361	7.4	6.0	0.8	2.7	0.3	.....	.....	51.8	7.0	2.7
All rural cheese producing areas.....	99	583	5.9	18.0	3.1	12.0	2.0	.....	.....	26.6	4.5	1.0
Ontario rural non cheese producing area.....	52	236	4.5	10.6	2.3	8.8	1.9	0.8	0.2	3.6	0.8	.....
Quebec rural non cheese producing area.....	108	772	7.2	3.7	0.5	2.1	0.3	1.2	0.1	9.1	1.3	.....
All rural non cheese producing areas.....	160	1,008	6.3	6.0	0.9	4.3	0.7	0.4	0.1	7.3	1.2	.....
Alberta rural area.....	101	407	4.0	12.1	3.0	6.2	1.5	5.1	1.3	3.7	0.9	0.2	
Totals and averages for farm areas.....	360	1,998	5.6	11.0	2.0	6.9	1.3	1.7	0.3	11.6	2.1	0.4	
Grand totals and averages.....	3,213	15,108	4.7	8.8	1.9	6.6	1.4	4.0	0.9	11.4	2.4	0.5	
												31.4	
												6.7	

Includes oka cheese.

The average annual per capita consumption of cheese of all kinds in 816 representative families in the city of Oshawa, Ontario, was 8.6 pounds. In 996 families in the city of Calgary the per capita consumption was 7.5 pounds and in 790 families in the city of Quebec, 5.2 pounds.

Of all the localities visited the average annual per capita consumption was highest in the fifty families in the Ontario cheese producing area near Belleville, where the consumption per person was 11.9 pounds. This district was selected as representative of other rural cheese producing areas of the province of Ontario. The lowest average per capita consumption in the localities where information was obtained was among the farm families in non-producing areas of the province of Quebec, where only 2.1 pounds per person per year was consumed.

FIGURE 2: AVERAGE PER CAPITA CONSUMPTION OF CHEESE PER YEAR IN CERTAIN LOCALITIES OF CANADA, 1935.



The families in the cheese producing farm areas visited had a higher annual average per capita consumption of cheese than was found among the families visited in the cities, villages and other farm areas (figure 2, table 3). It was 9.8 pounds, while the figures for cities and villages were 6.9 pounds and 5.9 pounds, respectively. In the Alberta rural area, it was 6.8 pounds and in the rural non-cheese-producing areas of Ontario and Quebec it averaged only 2.9 pounds.

Consumption of Canadian Cheddar Cheese.—Of the three cities, Oshawa had the highest annual per capita consumption of mild and strong Canadian cheddar cheese. Calgary came second and Quebec city third, with an average per capita consumption of mild Canadian cheddar cheese of 1.1 pounds per year and an average per capita consumption of strong Canadian cheddar of 0.7 of a pound per year as compared with an average per capita consumption of mild Canadian cheddar cheese of 2.5 pounds and an average per capita consumption of strong Canadian cheddar cheese of 2.2 pounds for the city of

Oshawa. For all three cities, there was a larger consumption of mild Canadian cheddar cheese than of strong Canadian cheddar cheese.

Of the three villages, St. Romuald had the lowest annual per capita consumption of mild and strong Canadian cheddar cheese; Uxbridge had the highest average per capita consumption of strong Canadian cheddar cheese and Claresholm had the highest average per capita consumption of mild Canadian cheddar cheese. There was a marked difference in the rates of consumption of mild and strong Canadian cheddar cheese in Claresholm. The average per capita consumption of mild Canadian cheddar was 2.8 pounds per year and the average per capita consumption of strong Canadian cheddar was only 1.1 pounds.

In the rural areas the most significant fact was the higher consumption of mild and strong Canadian cheddar cheese in rural areas where cheese is produced. The per capita consumption of Canadian cheddar cheese in the Alberta rural area came second only to the per capita consumption of the same kind of cheese in the Ontario rural cheese area.

Consumption of Cottage and Cream Cheese.—The average per capita and per family consumption of cottage and cream cheese (including oka cheese) per year was much lower in Quebec city than in the other two cities. In villages and farm areas, the consumption of that kind of cheese was almost a negligible factor. In the Alberta rural area, however, the average per capita consumption of cottage and cream cheese per year was 1.3 pounds. This was just as high as the per capita consumption for the city of Calgary.

Consumption of Processed Cheese.—There was not much difference in the rates of consumption of processed cheese for the three cities. Quebec, with an average of 2.7 pounds, had the highest per capita consumption of processed cheese per year, and Calgary, with an average of 2.3 pounds, had the lowest. Not much variation either was noticed in the rates of consumption of processed cheese for the three villages. Claresholm had an average per capita consumption per year of 2.1 pounds and Uxbridge and St. Romuald had an average per capita consumption per year of 1.9 pounds. The consumption of processed cheese in farm areas was rather low, except in the case of the Quebec rural cheese producing area, for which the average per capita consumption was 7 pounds. The higher figure in that area is due to the fact that the "Island of Orleans" cheese was included with processed cheese. There was little difference in the rates of consumption of processed cheese in cities, villages and farm areas. However, the relatively high consumption of processed cheese in farm areas is mostly due to the large use of "Island of Orleans" cheese in the Quebec rural cheese producing area.

Consumption of Imported Cheese.—The consumption of imported cheese was a very negligible factor in all the areas surveyed. The average per capita consumption per year for all areas was only 0.1 of a pound.

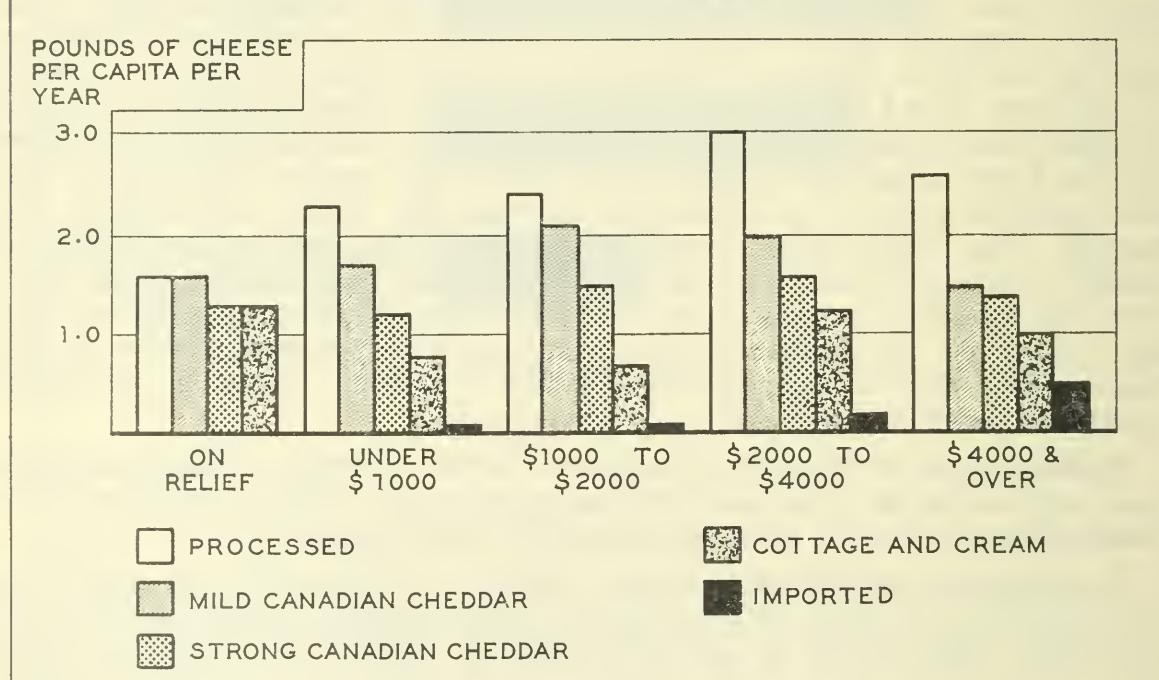
Consumption on Cheddar Cheese Basis.—In considering the annual per capita cheese consumption it must not be forgotten that the moisture content varies quite considerably in different kinds of cheese and the figure quoted above is based not only on the cheddar variety, but also includes cottage, cream and processed cheese, all of which have a fairly high moisture content. To obtain a more representative figure, therefore, the annual per family and per capita consumption, after the various kinds of cheese have been reduced to the same moisture content as that of Canadian cheddar cheese, were calculated and are shown in table 4. The annual family consumption on this basis for all areas studied was 28.3 pounds and the annual per capita consumption 6 pounds.

TABLE 4.—Annual Consumption of All Types of Cheese per Family and per Capita in Certain Localities when All Cheese has been Brought to the Same Moisture Content as Cheddar Cheese, 1935.

Locality	Number of families	Number of persons	Average number of persons	Total annual consumption of all cheese brought to same moisture content as cheddar cheese	
				Per family	Per capita
Oshawa.....	816	3,365	4.1	31.7	7.7
Quebec City.....	790	4,686	5.9	27.5	4.6
Calgary.....	996	3,995	4.0	26.9	6.7
All three cities.....	2,602	12,046	4.6	28.6	6.2
Villages.....	251	1,064	4.2	23.7	5.6
Farm Areas.....	360	1,998	5.6	29.5	5.3
Grand Total.....	3,213	15,108	4.7	28.3	6.0

Family Income and Cheese Consumption.—With an increase in income there was an increase in the total family consumption of cheese of all kinds (table 5 and figure 3). There was also an increase in the total per capita consumption of cheese with an increase in income except for the highest income group (\$4,000 and over). It will be observed that the average number of persons per family in the highest income group was larger than that in any other income group.

FIGURE 3: RELATION OF CONSUMPTION OF CHEESE TO FAMILY INCOME IN CERTAIN LOCALITIES OF CANADA, 1935.



Almost the same relationship was revealed between the various income groups in the consumption of Canadian cheddar cheese (mild and strong) and processed cheese as there was for total cheese consumption. In the case of cottage and cream cheese, however, there was not much relationship between per capita consumption and income. The highest rates of consumption of cottage and cream cheese were found in the relief group and in the two higher income groups.

TABLE 5.—Relation of Family Income to Annual Consumption of Cheese in 3,213 Families in Certain Localities of Canada, 1935

Family income	Number of families	Number of persons	Average number of persons	Average consumption								Total	
				Mild Canadian Cheddar		Strong Canadian Cheddar		Cottage and Cream		Processed			
				Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita		
Relief	189	921	4.9	7.6	1.6	6.5	1.3	6.5	1.3	7.6	1.6	28.2	
Under \$1,000	1,263	5,868	4.6	8.1	1.7	5.8	1.2	3.6	0.8	10.6	2.3	0.3	
\$1,000 to \$1,999	1,060	4,978	4.7	9.9	2.1	7.0	1.5	3.2	0.7	11.4	2.4	0.3	
\$2,000 to \$3,999	544	2,486	4.6	8.9	2.0	7.5	1.6	5.4	1.2	13.5	3.0	1.0	
\$4,000 and over	151	826	5.5	8.1	1.5	7.9	1.4	5.4	1.0	14.5	2.6	2.6	
Totals*	3,213	15,108	4.7	8.8	1.9	6.6	1.4	4.0	0.9	11.4	2.4	0.5	
												31.4	
												6.7	

*Six families did not state their income.

Family Income and Cheese Consumption in Cities.—The relation of family income to annual consumption of different kinds of cheese in the three cities of Oshawa, Quebec, and Calgary is shown in table 6. In Quebec City and Calgary there was an increase in the total consumption of cheese with an increase in family income till an income of over \$4,000 had been reached. At that point, a tendency for the consumption of cheese to decrease was manifest.

In the city of Oshawa, there did not seem to be any relation between family income and the consumption of cheese. The highest rates of consumption were found in the relief group and in the group with a family income varying from \$2,000 to \$4,000, while the lowest rate was found in the income group of \$4,000 and over.

It will be noted that in the city of Oshawa the per capita consumption of strong Canadian cheddar cheese, cottage and cream cheese was higher in the relief group than in any other group. The consumption of cottage and cream cheese by the people on relief in that city was more than twice as high as the consumption of these two kinds of cheese by the people of any other income group. The relatively large consumption of cottage and cream cheese by these people was mainly responsible for their consumption of cheese being higher than that of any other income group of people in that city.

In the city of Quebec the tendency for the consumption of cheese to increase with an increase in the family income was evident in the case of all kinds of cheese except strong Canadian cheddar and processed cheese. A tendency for the consumption of the last two kinds of cheese to decrease was apparent in the highest income group.

For the city of Calgary, there was no marked relationship between family income and consumption of cheese when the various kinds of cheese were studied separately. The processed cheese was the only one for which there was a definite increase in consumption with an increase in family income till an income of \$4,000 and over had been reached.

When the figures on cheese consumption for the three cities were analysed together, as family income increased up to \$4,000, so the per capita consumption of cheese increased; at higher incomes than this, however, per capita consumption declined. There was also an increase in the family consumption of cheese as family income increased and there was no decrease in the rate of consumption per family once an income of \$4,000 and over had been reached. It will be observed that the average number of persons per family in the highest income group was 5.5 as compared to an average of 4.6 persons per family for all income groups.

Pursuing the analysis of these figures a little further, it is found that the tendency for the consumption of cheese to increase with an increase in family income and to decrease once an income of \$4,000 has been reached, is manifest for all kinds of cheese except cottage and cream cheese. There does not seem to be much relation between the consumption of cottage and cream cheese and the family income.

Consumption by National Types and Kinds of Cheese Consumed.—Ukrainian and Jewish people were the largest consumers of cheese. Their average individual consumption as well as the average amount consumed by each family was much higher than that of people of any other nationality. However, it will be noted that the number of families in these two groups was rather small by comparison with the number of families for most of the other nationality groups. Moreover, these people used large quantities of home-made cottage cheese which is high in moisture content and in many respects is not comparable to other types of cheese.

TABLE 6.—Relation of Family Income to Annual Consumption of Cheese in the Three Cities of Oshawa, Quebec and Calgary, 1935

Family income		Number of families	Number of persons	Average number of persons	Average consumption								Total
					Mild Canadian Cheddar		Strong Canadian Cheddar		Cottage and Cream		Processed		
Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita
<i>Oshawa—</i>													
Relief	53	213	4.0	6.6	1.6	9.8	2.5	15.6	3.9	5.2	1.3	...	37.3
Under \$1,000	328	1,348	4.1	9.1	2.2	9.5	2.3	7.7	1.9	2.3	0.2	0.0	35.9
\$1,000 to \$2,000	300	1,272	4.2	12.2	2.9	8.3	2.0	2.9	0.7	11.2	0.3	0.1	34.7
\$2,000 to \$4,000	104	401	3.9	10.7	2.8	8.2	2.1	3.1	0.8	12.1	0.9	0.2	34.9
\$4,000 and over	31	131	4.2	5.2	1.2	8.8	2.1	4.1	1.0	12.5	2.9	0.3	31.8
Total	816	3,365	4.1	10.1	2.5	8.9	2.2	5.7	1.4	10.2	2.5	0.3	35.3
<i>Quebec City—</i>													
Relief	60	351	5.9	4.3	0.7	3.4	0.6	1.1	0.2	10.4	1.8	...	19.1
Under \$1,000	286	1,641	5.7	6.6	1.1	2.9	0.5	1.6	0.3	2.5	0.1	...	25.7
\$1,000 to \$2,000	245	1,465	6.0	6.5	1.1	3.9	0.7	2.6	0.4	14.9	2.5	0.3	29.0
\$2,000 to \$4,000	140	819	5.9	7.1	1.2	8.9	1.5	5.0	0.8	21.0	3.6	1.4	43.4
\$4,000 and over	58	404	7.0	10.7	1.5	3.4	0.5	5.9	0.8	20.6	3.0	4.6	45.0
Total*	790	4,686	5.9	6.8	1.1	4.3	0.7	2.8	0.5	15.9	2.7	0.7	30.8
<i>Calgary—</i>													
Relief	67	318	4.7	11.7	2.5	6.8	1.4	5.0	1.1	7.5	1.6	0.1	31.2
Under \$1,000	272	1,001	3.7	7.6	2.1	5.2	1.4	4.5	1.2	7.9	2.1	0.6	25.8
\$1,000 to \$2,000	343	1,362	4.0	9.0	2.3	7.4	1.9	4.2	1.1	9.9	2.5	0.5	31.0
\$2,000 to \$4,000	259	1,062	4.1	8.5	2.1	5.9	1.4	7.1	1.7	10.5	2.6	1.0	33.0
\$4,000 and over	54	249	4.6	5.9	1.3	9.2	2.0	5.8	1.3	10.2	2.2	1.4	32.6
Total*	996	3,995	4.0	8.5	2.1	6.5	1.6	5.2	1.3	9.3	2.3	0.7	30.2
<i>All Three Cities—</i>													
Relief	180	882	4.9	7.7	1.6	6.6	1.3	6.8	1.4	7.8	1.6	...	29.0
Under \$1,000	836	3,990	4.5	7.8	1.7	6.0	1.3	4.8	1.1	10.6	2.3	0.3	29.5
\$1,000 to \$2,000	888	4,099	4.6	9.4	2.0	6.8	1.5	3.3	0.7	11.7	2.5	0.1	31.7
\$2,000 to \$4,000	503	2,282	4.5	8.6	1.9	7.2	1.6	5.7	1.3	13.7	3.0	0.4	36.3
\$4,000 and over	143	784	5.5	7.7	1.4	6.7	1.2	5.4	1.0	14.9	2.7	0.5	37.4
Total†	2,602	12,046	4.6	8.5	1.8	6.6	1.4	4.6	1.0	11.6	2.5	0.6	32.0

*One family did not state its income.
† Two families did not state their income.

TABLE 7.—Relation of National Types to Annual Consumption of Cheese in Certain Localities in Canada, 1935

National types	Number of families	Number of persons	Average number of persons	Average consumption								Total	
				Mild Canadian Cheddar		Strong Canadian Cheddar		Cottage and Cream		Processed			
				Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita		
				lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	
French Canadian.....	967	5,957	6.2	6.6	1.1	3.9	0.6	2.2	0.4	16.8	2.7	0.7	
American.....	69	298	4.3	9.5	2.2	4.8	1.1	5.0	1.1	8.0	1.9	0.1	
German.....	23	132	5.7	10.7	1.9	5.6	1.0	5.2	0.9	15.0	2.6	0.1	
Others.....	116	542	4.7	4.2	1.0	6.7	1.4	10.5	2.3	8.7	1.9	0.1	
Canadian.....	1,153	4,609	4.0	10.2	2.5	8.0	2.0	3.1	0.8	8.5	2.1	0.4	
English and Welsh.....	482	1,832	3.8	10.2	2.7	8.3	2.2	2.5	0.7	9.4	2.5	0.6	
Irish and Scotch.....	289	1,205	4.2	12.1	2.9	8.1	2.0	3.0	0.7	9.9	2.4	0.6	
Ukrainian.....	84	403	4.8	3.6	0.8	8.4	1.8	31.2	6.5	10.1	2.1	0.1	
Jewish.....	27	122	4.5	2.4	0.5	1.2	0.3	32.7	7.2	13.9	3.1	0.6	
Totals*	3,213	15,108	4.7	8.8	1.9	6.6	1.4	4.0	0.9	11.4	2.4	0.5	
												0.1	
												31.4	
												6.7	

*Three families did not state their origin.

The per capita consumption of cheese by French-Canadians was the lowest. But the per family consumption for the same group was about the same as that of any other group except the Ukrainian and the Jewish group. There was an average of 6.2 persons in the French-Canadian families as compared with an average of 4.7 persons for all nationality groups.

There was not much variation in the rates of consumption of cheese by people of Canadian or British (English, Welsh, Irish, and Scotch) origins. The per capita consumption was 7.5 pounds per year for the Canadian group and 8.1 pounds per year for the British groups (table 7).

People of Canadian or British origin had the highest per capita consumption of mild Canadian cheddar cheese, while people of Ukrainian and Jewish origin had about the lowest per capita consumption of the same kind of cheese. The per capita as well as the per family consumption of mild Canadian cheddar cheese by French Canadians was among the lowest.

Strong Canadian cheddar cheese was consumed most extensively by people of Canadian or British origin. People of French Canadian and Jewish origin had the lowest per capita consumption of that kind of cheese.

The per capita consumption of cottage and cream cheese by people of Jewish and Ukrainian origin was 7.2 pounds and 6.5 pounds per year, respectively, as compared with an average per capita consumption of 0.9 pound per year for all nationality groups.

Not much difference was found in the rates of consumption of processed cheese by people of various nationalities. The average per capita consumption by people of all nationalities was 2.4 pounds per year and the consumption by people of various nationalities did not vary by more than 0.5 pound from that average except in the case of the Jewish group, for which the per capita consumption per year was 3.1 pounds.

Consumption by Occupational Groups and Kinds of Cheese Consumed.

—The per capita consumption of cheese in families in which the head of the household was a farmer was 5.9 pounds per year. This was the lowest rate of cheese consumption for any occupational group. The low consumption in the non-cheese-producing farm areas in Quebec had an important influence in lowering the consumption among farmers. The highest per capita rate of consumption of cheese was found in families in which the head was "retired"; in these families it was 8 pounds per year (table 8).

Generally speaking, the farmer, labourer and executive-of-small-business groups had a lower per capita consumption of cheese than any other occupational group.

The per capita consumption of mild Canadian cheddar cheese was smallest in families in which the head was an unskilled labourer or an executive in a small business concern.

Strong Canadian cheddar cheese was consumed most extensively in families in which the head of the household was retired and least extensively in families at the head of which were salesmen. For the other occupational groups, there was not much variation in the rates of consumption of this kind of cheese.

The highest rates of consumption of cottage and cream cheese were found in the unskilled labourer and the executive-of-small-business groups and the lowest consumption was in the clerk and in the farmer groups.

The salesman, clerk, professional and executive-of-large-business groups had the highest rates of consumption of processed cheese. These rates only varied from 2.8 to 3 pounds per capita per year. The rates of consumption for the other groups varied from 1.8 to 2.6 pounds per capita per year.

TABLE 8.—Relation of Occupation to Annual Consumption of Cheese in Certain Localities of Canada, 1935

Occupation	Number of families	Number of persons	Average number of persons	Average consumption								Total	
				Mild Canadian Cheddar		Strong Canadian Cheddar		Cottage and Cream		Processed			
				Per family	Per capita	Per family	Per capita	Per family	Per capita	Per family	Per capita		
Not stated.....	134	417	3.1	6.9	1.5	7.0	1.5	4.7	1.0	8.7	1.9	0.5	
Farmer.....	333	1,751	5.3	11.7	2.2	7.2	1.4	2.4	0.5	9.3	1.8	0.3	
Unskilled Labourer.....	484	2,321	4.8	7.2	1.5	6.8	1.4	5.9	1.2	9.8	2.0	0.2	
Executive, Small Business.....	157	747	4.8	5.9	1.2	5.5	1.2	7.7	1.6	12.0	2.5	0.5	
Skilled Labourer.....	855	4,127	4.8	9.4	2.0	7.0	1.5	3.5	0.7	11.4	2.4	0.5	
Salesman.....	191	936	4.9	9.8	2.0	4.5	0.9	4.2	0.9	14.2	2.9	0.4	
Clerk.....	308	1,397	4.5	9.4	2.1	6.5	1.4	2.1	0.5	12.9	2.8	0.3	
Professional.....	315	1,492	4.7	8.6	1.8	6.3	1.3	4.1	0.9	14.2	3.0	1.4	
Executive, Large Business.....	268	1,214	4.5	7.8	1.7	6.1	1.3	5.1	1.1	12.9	2.8	1.2	
Retired.....	168	500	3.0	6.2	2.1	7.8	2.6	2.0	0.7	7.6	2.6	0.2	

Consumption and Size of Family.—It was demonstrated quite clearly (table 9, figure 4) that an increase in the number of persons, adults or children, in the family was accompanied by a decrease in the per capita consumption of cheese. The per capita consumption was as high as 10.2 pounds for families of one or two adults and as low at 2.6 pounds for families of five adults or more and seven children or more.

FIGURE 4: RELATION BETWEEN PER CAPITA CONSUMPTION OF CHEESE AND SIZE OF FAMILY, 3213 FAMILIES IN CERTAIN LOCALITIES OF CANADA, 1935.

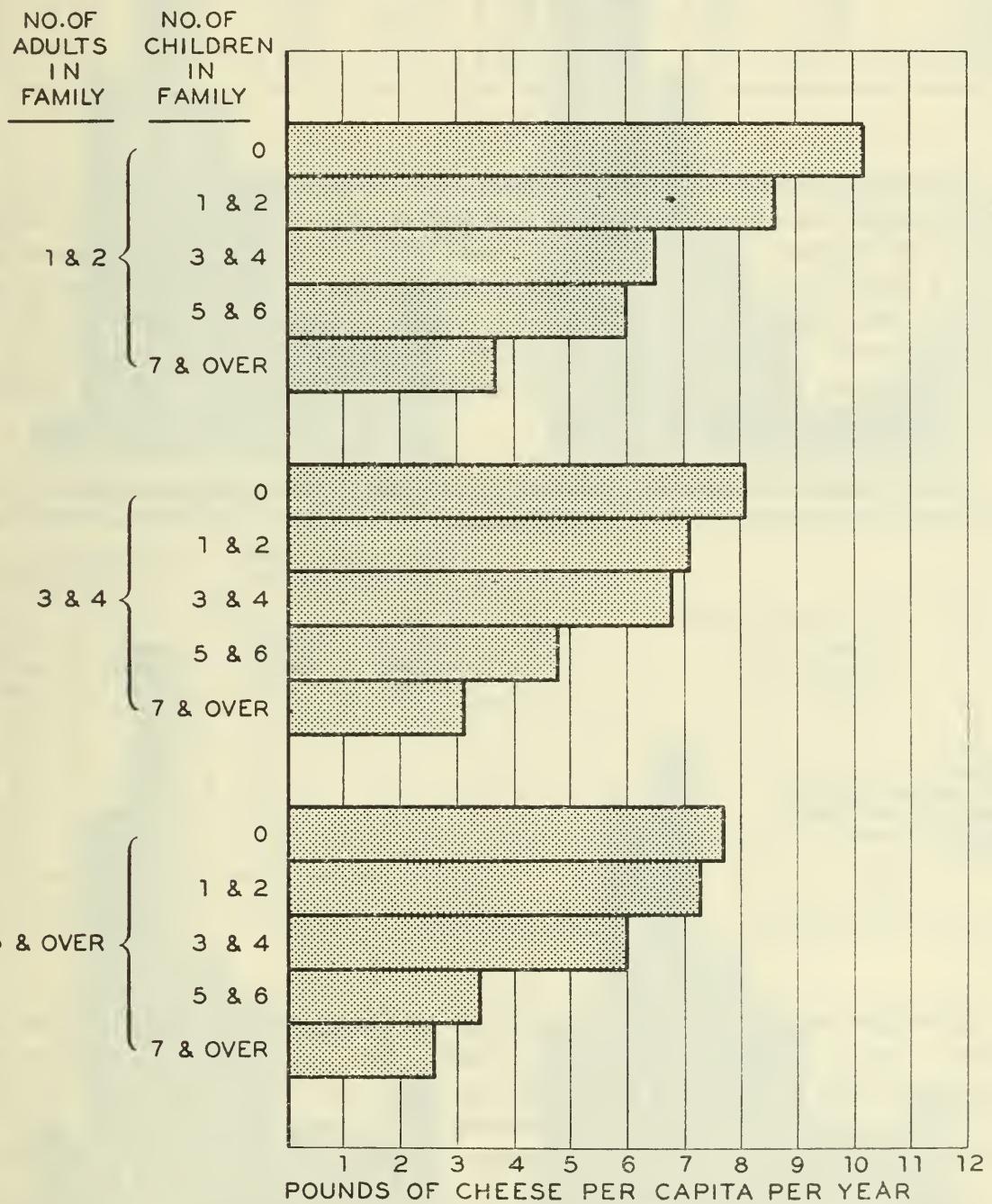


TABLE 9.—Relation of Annual Consumption of Cheese to Number of People in the Family—3,213 Families in Certain Localities of Canada, 1935

Number of children in family	Number of adults in the family								
	1 and 2			3 and 4			5 and over		
	Number of families	Per capita consumption	Per family consumption	Number of families	Per capita consumption	Per family consumption	Number of families	Per capita consumption	Per family consumption
		lb.	lb.		lb.	lb.		lb.	lb.
0.....	497	10.2	19.5	583	8.1	27.7	225	6.7	36.7
1 and 2.....	588	8.6	29.5	436	7.1	34.0	171	6.3	43.8
3 and 4.....	221	5.5	25.1	146	6.8	45.7	78	5.0	44.8
5 and 6.....	72	5.0	36.4	75	4.8	41.2	38	3.4	38.2
7 and over....	32	3.7	36.4	33	3.1	35.9	18	2.6	34.9

Consumption According to Season.—The consumption of cheese was only slightly higher in the cold weather (September-May) than in the hot weather (June-July-August). The per capita consumption in the cold weather months was 0.4 pound more than in the hot weather months and the per family consumption was only 1.8 pounds higher in the cold weather than in the hot weather months. This was true for every kind of cheese except cottage, cream and oka cheese, for all of which the consumption was very slightly lower in the cold weather months.

TABLE 10.—Seasonal Consumption of Various Kinds of Cheese in Various Localities of Canada, 1935

Kinds of cheese	Hot weather months (June-July-August)		Cold weather months (September-May)	
	Per capita consumption	Per family consumption	Per capita consumption	Per family consumption
			lb.	lb.
Processed.....	1.7	7.9	1.8	8.4
Mild Canadian cheddar.....	1.4	6.4	1.5	7.1
Strong Canadian cheddar.....	1.0	4.8	1.2	5.4
Cottage and cream.....	0.7	3.1	0.6	3.0
Imported.....	0.1	0.3	0.1	0.4
Total.....	4.8	22.5	5.2	24.3

Distribution of Families According to Consumption Rates.—The most common rates of consumption of cheese for all localities visited were between 3.1 and 6.1 pounds per capita per year, and these rates were true also for the localities visited in the provinces of Ontario and Alberta. For the localities visited in the province of Quebec the most common rates were between 0.1 and 3.1 pounds. (Table 11, figure 5.) In this province, however, there was a large group of families in which no consumption of cheese was reported. Indeed this group was the largest in any province and included 260 families, compared with 70 in Alberta and 22 in Ontario.

FIGURE 5:

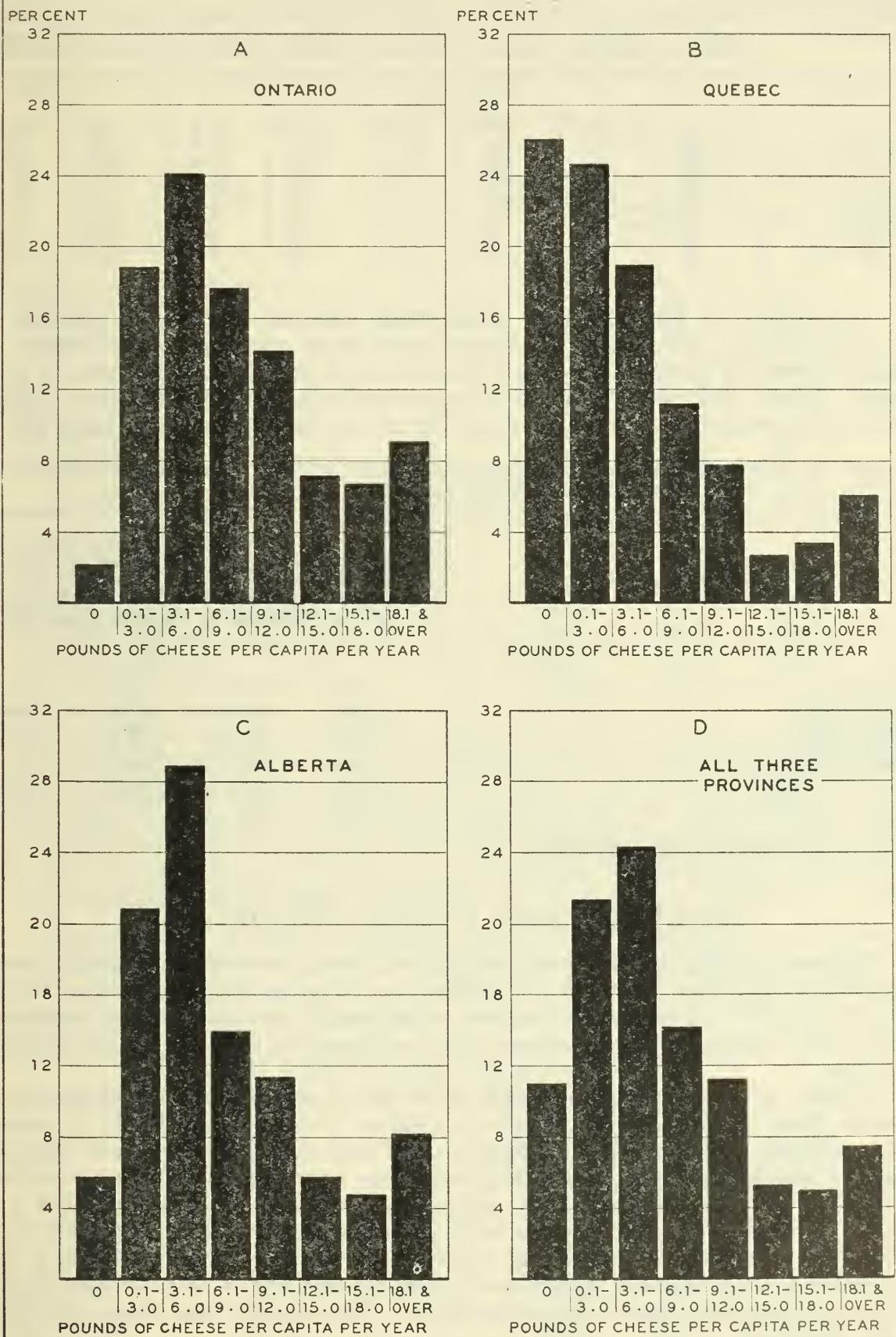
FREQUENCY DISTRIBUTION OF CHEESE CONSUMPTION
IN THREE PROVINCES OF CANADA, 1935

TABLE 11.—Frequency Distribution of Families Consuming Different Quantities of Cheese in Certain Localities of Canada, 1935

Yearly per capita consumption of cheese	Ontario		Quebec		Alberta		All three provinces	
	Number of families	Proportion of families	Number of families	Proportion of families	Number of families	Proportion of families	Number of families	Proportion of families
pounds		%		%		%		%
0.....	22	2.2	260	26.1	70	5.8	352	11.0
0.1-3.0.....	193	18.9	245	24.7	251	20.9	689	21.4
3.1-6.0.....	247	24.1	189	19.0	347	28.9	783	24.3
6.1-9.0.....	180	17.7	111	11.2	167	13.9	458	14.2
9.1-12.0.....	145	14.2	78	7.8	137	11.4	359	11.2
12.1-15.0.....	73	7.2	27	2.7	70	5.8	170	5.3
15.1-18.0.....	68	6.7	34	3.4	58	4.8	160	5.0
18.1 and over.....	93	9.1	51	5.1	98	8.2	242	7.5

Proportion of Families Not Consuming Cheese.—Nearly 72 per cent of the 3,213 families included in the study reported no consumption of cottage or cream cheese; 32 per cent used no Canadian cheddar; and 36 per cent no processed. There did not appear to be any particular relation between family income and proportion of families reporting no cheese consumption (table 12).

TABLE 12.—Proportion of Families Not Consuming Various Kinds of Cheese, According to Family Income. 3,213 Families in Certain Localities of Canada, 1935

Family income	Number of families	Proportion of families not consuming various kinds of cheese		
		Canadian cheddar	Processed	Cottage and cream
On relief.....	189	33.3	52.4	75.7
Under \$1,000.....	1,263	40.5	25.2	80.4
\$1,000 to \$2,000.....	1,060	28.6	20.6	76.6
\$2,000 to \$4,000.....	544	20.6	29.3	42.7
\$4,000 and over.....	151	29.8	46.4	67.6
Total*.....	3,213	32.2	35.8	71.9

*Six families did not state their incomes.

REGULARITY OF CHEESE PURCHASES

Generally speaking, processed, cottage and cream cheese were bought more regularly by families living in cities than by those residing in villages or on farms (table 13). There was, however, considerable variation in the regularity with which Canadian cheddar cheese was purchased by families in the different localities.

A much lower proportion of families bought cheese regularly in Quebec city than in Oshawa or Calgary. People in Oshawa purchased all kinds of cheese more regularly. In the cities of Oshawa and Calgary, the proportion of families buying Canadian cheddar cheese regularly was very similar to the proportion of families buying processed cheese regularly. Of the three villages, there was a much lower proportion of families buying cheese regularly in St. Romuald than in the two villages of Uxbridge and Claresholm. In these last two villages, the proportion buying cheddar type cheese regularly was larger than the proportion of families buying processed cheese regularly. The opposite was true in the case of St. Romuald.

In the Ontario rural cheese producing area 94 per cent of the families visited bought Canadian cheddar cheese regularly. This was the highest percentage for any of the localities visited. In the Ontario rural non-cheese-pro-

ducing area, 79 per cent of the families visited bought Canadian cheddar cheese regularly. In these two Ontario rural areas the proportion of families buying Canadian cheddar cheese regularly was much larger than the proportion buying processed, cottage or cream cheese regularly.

The farm families interviewed in rural Québec purchased cheese of all kinds less regularly than farm families visited in rural parts of Ontario and Alberta.

TABLE 13.—Proportion of Families Buying Cheese Regularly, 3,213 Families in Certain Localities of Canada, 1935

Locality	Number of families	Proportion of Families Buying Cheese Regularly		
		Canadian Cheddar	Processed	Cottage and cream
<i>Cities—</i>		%	%	%
Oshawa.....	816	75	79	28
Quebec City.....	790	26	47	13
Calgary.....	996	52	48	20
All Three Cities.....	2,602	52	58	21
<i>Villages—</i>				
Uxbridge.....	102	81	52	2
St. Romuald.....	48	17	38	2
Claresholm.....	101	58	47	6
All Three Villages.....	251	60	47	4
<i>Farm Areas—</i>				
Ontario Rural Cheese Producing Area.....	50	94	6	.....
Ontario Rural Non-cheese-Producing Area.....	52	79	23	10
Quebec Rural Cheese Producing Area.....	49	20	22	2
Quebec Rural Non-cheese-Producing Area.....	108	11	21	.....
Alberta Rural Area.....	101	42	22	5
All Farm Areas.....	360	42	20	3
Grand Total and Averages.....	3,213	51	52	17

About half the families in all the localities visited bought Canadian cheddar cheese or processed cheese regularly. In only 17 per cent of the households visited were cottage and cream cheese bought regularly. Since the per capita consumption of Canadian cheddar cheese and processed cheese was much higher than the consumption of cottage and cream cheese, it would seem that there is some association between large consumption and regularity of purchase of cheese.

Regularity of Cheese Purchases and Family Income.—An increase in family income was accompanied by a marked increase in the proportion of families buying processed cheese regularly (table 14). Families with high incomes also bought Canadian cheddar cheese more regularly than those with

TABLE 14.—Proportion of Families Buying Cheese Regularly, 3,213 Families of Various Income Levels in Certain Localities of Canada, 1935

Family Income	Number of families	Proportion of Families Buying Cheese Regularly		
		%	%	%
On relief.....	189	48	34	21
Under \$1,000.....	1,263	46	49	13
\$1,000 to \$2,000.....	1,060	54	55	16
\$2,000 to \$4,000.....	544	58	60	26
\$4,000 and over.....	151	56	62	28
Total.....	3,213	51	52	17

low incomes. The same tendency was also manifest in the case of cottage and cream cheese although there was a higher proportion of families on relief than with an income up to \$2,000 buying these two kinds of cheese regularly.

Quantity of Cheese Bought at One Time.—Cheese was not bought in large quantities at any one time. Indeed, of 1,146 housewives interviewed 986 purchased half a pound or less, 812 bought over this quantity but not above one pound, and only 75 housewives made purchases exceeding 2 pounds. There is little doubt that the reason for such small purchases is to ensure original freshness and also to obviate the chance of larger quantities drying out.

TABLE 15.—Quantity of Canadian Cheddar Cheese Bought at One Time, 1,146 Families in Certain Localities of Canada, 1935

Amount bought at one time	Number of families
lb.	
0.5 and less.....	986
0.6 to 1.00.....	812
1.1 to 1.5.....	17
1.6 to 2.0.....	83
2.1 and over.....	75

Processed cheese was almost invariably bought by the single package and of 2,060 housewives questioned only 8 per cent purchased more than this quantity at one time. The number making purchases above two packages at any one time was negligible.

Cheese as Substitute for Other Foods.—With a view to ascertaining whether cheese was simply an additional item in the diet or was a substitute for other foods, the housewives visited were asked if cheese displaced any other foods in the family menu. About 61 per cent of the answers were in the negative. About 23 per cent of the housewives reported that cheese or cheese dishes were served in place of meat (table 16). With an increase in income, there was an increase in the proportion of families where cheese was used as an addition to the family meals and not merely as a main course.

TABLE 16.—Proportion of Families in which Cheese Replaces Other Foods in 3,213 Households in Certain Localities of Canada

Family Income	Number of families	Proportion of Families in which Cheese replaces other foods				
		Not stated	No food	Meat	Meat and Eggs	Other foods
		%	%	%	%	%
On relief.....	189	11.1	52.9	23.8	6.4	5.8
Under \$1,000.....	1,263	13.1	57.9	21.1	4.8	3.2
\$1,000 to \$2,000.....	1,060	5.4	62.5	25.0	5.0	2.1
\$2,000 to \$4,000.....	544	4.4	64.7	24.5	3.7	2.8
\$4,000 and over.....	151	2.7	76.2	13.3	6.6	1.3
Totals or averages*.....	3,213	8.4	61.2	22.7	4.9	2.8

* Six families did not state their income.

PREFERENCES FOR VARIOUS KINDS OF CHEESE

An effort was made to ascertain the kinds of cheese preferred by women, men and children and these preferences are shown in table 17. Because the information was obtained from the housewives and not from the men and children as well, it may not be entirely correct. However, the table is probably accurate enough to indicate a trend in preferences. The data in table 17 refer to the three cities only.

TABLE 17—Preferences for Various Kinds of Cheese, in Oshawa, Quebec and Calgary, by Women, Men and Children, According to the Housewives' Opinions, 1935

Locality and Choice	WOMEN				MEN				CHILDREN				Imported	Dislike cheese of any kind	
	Mild cheddar	Strong cheddar	Cottage and Cream	Processed	Dislike cheese of any kind	Mild cheddar	Strong cheddar	Processed	Dislike cheese of any kind	Mild cheddar	Strong cheddar	Processed			
<i>Oshawa, Ont.—</i>															
1st choice.....	263	173	85	231	15	34	253	266	18	39	126	61	60	174	3
2nd choice.....	73	105	85	253	9			78	246	17	46	47	46	103	2
3rd choice.....	10	29	47	61	5		14	13	50	68	4	12	16	21	1
4th choice.....	2	3	16	6	4		3	4	20	5	5	2	2	6	1
<i>Quebec, Que.—</i>															
1st choice.....	90	65	78	349	24	169	105	89	58	323	25	154	66	33	56
2nd choice.....	56	33	28	67	13		37	24	42	80	14	43	29	15	40
3rd choice.....	7	7	5	12	4		7	5	5	21	2	6	6	9	8
4th choice.....	.....	3	2	1	1		1	2	2	.....	.....	3	2	.....	1
<i>Calgary, Alta.—</i>															
1st choice.....	258	146	113	381	21	74	288	191	85	294	20	60	91	39	57
2nd choice.....	178	52	96	224	18		120	38	99	247	23	90	22	49	76
3rd choice.....	35	14	61	44	20		30	7	57	42	16	18	15	22	17
4th choice.....	1	2	3	5	8		1	1	5	5	4	.....	2	1	2

Generally speaking, mild cheddar and processed cheese were most popular. In the city of Oshawa women and children preferred mild Canadian cheddar cheese to any other kind of cheese while a slightly larger number of men favoured strong Canadian cheddar cheese. Processed cheese was well-liked but more women and men gave it second than first choice.

In the cities of Quebec and Calgary processed cheese was preferred to any other kind of cheese by women, men and children. This trend was more pronounced in Quebec city. In the city of Calgary, the number of men who gave first preference to mild Canadian cheddar was almost as large as the number of those who gave first preference to processed cheese.

Canadian Cheddar Cheese.—Of the 3,213 families visited, 1,354 or 42.1 per cent, used more Canadian cheddar cheese than processed cheese. People in 633 of these families liked Canadian cheddar cheese better than processed cheese (table 18). This indeed seemed to be by far the most important factor accounting for a greater use of Canadian cheddar than processed cheese. Some 260 housewives said that they liked Canadian cheddar cheese better for cooking and 217 said that they used more of it because it was cheaper than other kinds of cheese.

TABLE 18.—Reasons Which Accounted for a Greater Use of Canadian Cheddar Cheese than Processed Cheese—1,354 Families in Certain Localities of Canada, 1935

Reasons	Number of families reporting
Like it better.....	633
Used in cooking.....	260
Cheaper.....	217
Habit.....	95
Better for salads and sandwiches.....	62
Better quality.....	42
All other reasons.....	45

Processed Cheese.—Of the 1,074 families which used more processed cheese than Canadian cheddar cheese, 523 said they used more of the first kind of cheese because they liked it better. Some 170 families used more processed cheese because they considered it better for making salads and sandwiches, and 116 families bought more of it because it was put in handier packages (table 19).

TABLE 19.—Reasons Which Accounted for a Greater Use of Processed Cheese than Canadian Cheddar Cheese, 1,074 Families in Certain Localities of Canada, 1935

Reasons	Number of families reporting
Like it better.....	523
Better for salads and sandwiches.....	170
Handier packages.....	116
Keeps better.....	80
Milder.....	46
Habit.....	46
More easily digested.....	21
Easier to get.....	20
All other reasons.....	52

Strong Canadian Cheddar Cheese.—Of the 3,213 housewives interviewed, 2,760 gave reasons for not buying more of this kind of cheese (table 20). About 62 per cent said they did not like it, and the proportion was larger among those with higher income than among those with lower incomes.

Approximately 18 per cent of the housewives claimed that it was too rich a food, while 2.5 per cent reported it is hard to digest.

Expense was the reason given by 5.5 per cent of the housewives, and as might be expected, this reason was more common among those families in the lower income groups.

TABLE 20.—Reasons why Strong Canadian Cheddar Cheese was not Used in Larger Quantities in Certain Localities of Canada, 1935

Family income	Number of families	Number of families reporting	Reasons given by Housewives						
			Dislike it	Too expensive	Hard to get	Prefer others	Hard to digest	Too rich	Other reasons
			%	%	%	%	%	%	%
On relief.....	189	170	54.1	18.8	1.2	2.4	1.2	20.0	2.3
Under \$1,000.....	1,263	1,063	59.9	6.8	3.4	4.9	3.4	16.2	5.4
\$1,000-\$2,000.....	1,060	921	63.7	3.6	1.6	5.4	2.2	18.0	5.4
\$2,000-\$4,000.....	544	471	64.8	2.5	2.8	4.2	1.7	19.1	4.9
\$4,000 and over.....	151	130	67.7	.....	.....	4.6	.....	18.5	3.8
Total*.....	3,213	2,760	62.0	5.5	2.4	4.8	2.5	17.7	5.1

* Six families did not state their income.

White or Coloured Canadian Cheddar Cheese.—About 52 per cent of the families visited preferred coloured to white Canadian cheddar cheese, and less than 2 per cent had a decided preference for the white variety. The remaining 46 per cent did not buy Canadian cheddar cheese and of course had no preference as to colour.

SOURCES OF PURCHASES OF CHEESE

Canadian Cheddar Cheese.—Of the 1,972 families who reported on the sources of purchase of Canadian cheddar cheese, 38.3 per cent patronized the independent groceries, and 39.5 per cent the chain groceries. There is probably some relationship between family income and the type of retail store at which housewives make their purchases (table 21). More than half the 113 families on relief bought their cheese at independent groceries and only about one-quarter bought it at chain groceries. For the other income groups, however, the difference in the proportion of housewives buying from the two different agencies did not differ very much.

TABLE 21.—Sources of Purchases of Canadian Cheddar Cheese by Families with Different Annual Incomes in Certain Localities of Canada, 1935

Family Income	Number of families reporting	Selling Agencies				
		Independent groceries	Chain groceries	Department stores	Independent and chain groceries	Other selling agencies
		%	%	%	%	%
On relief.....	113	55.8	25.7	9.7	5.3	3.5
Under \$1,000.....	717	38.6	39.9	11.9	3.6	6.0
\$1,000-\$2,000.....	680	34.6	44.3	11.9	3.7	5.6
\$2,000-\$4,000.....	356	37.9	36.5	16.9	3.4	5.3
\$4,000 and over.....	100	43.0	32.0	12.0	4.0	9.0
Total*.....	1,972	38.3	39.5	12.6	3.8	5.8

* Six families did not state their income.

Processed Cheese.—Processed cheese was bought more extensively from the independent grocery. Of the 1,971 families who gave information as to their place of business, as many as 46·6 per cent answered that they favoured the independent grocery (table 22).

TABLE 22.—Sources of Purchases of Processed Cheese by Families with Different Annual Incomes in Certain Localities of Canada in 1935

Family Income	Number of families reporting	Selling Agencies				
		Independent groceries	Chain groceries	Department stores	Independent and chain groceries	Other selling agencies
		%	%	%	%	%
On relief.....	95	57·9	25·3	9·5	6·3	1·1
Under \$1,000.....	656	48·0	36·6	9·2	2·6	3·7
\$1,000-\$2,000.....	719	44·2	40·9	9·6	3·8	1·5
\$2,000-\$4,000.....	395	44·1	35·2	13·7	3·5	3·5
\$4,000 and over.....	103	53·4	24·3	15·5	2·9	3·9
Totals*.....	1,971	46·6	25·3	9·5	6·3	1·1

* Six families did not state their income.

Method of Purchase.—About 2,000 housewives were questioned as to what they asked for when buying Canadian cheddar cheese. Nearly 55 per cent stated they asked for "Canadian" cheese and more than 32 per cent, for "cheddar" cheese. The remainder were more specific and asked for factory or old, new, mild or strong cheese. Very few housewives asked merely for cheese.

Price and Purchase.—With a view to ascertain how important a factor price was in the minds of the consumers, the housewives were asked if they inquired about the price of cheese before making their purchases. Of the 2,292 housewives who answered the question, only 1,229, or 53·6 per cent, said that they inquired about the price. However, it must be taken for granted that some of the 1,063 other housewives who did not inquire, considered such inquiry unnecessary, as being regular buyers, they were well acquainted with the price.

As it may be concluded that the housewives interviewed were reasonably keen buyers, the inference may be drawn that they purchased cheese on its price in relation to other food prices more than on its actual price, for, as stated elsewhere, nearly 75 per cent of the housewives interviewed did not consider cheese to be expensive in comparison with other foods.

METHODS OF SERVING DIFFERENT KINDS OF CHEESE

Canadian Cheddar Cheese.—The members of those families in which Canadian cheddar cheese was served in preference to other types would rather consume it in slices or cooked than in any other way. The housewives were asked to classify their families' preferences for various ways of serving cheese by order of importance. Cheese in slices, that is, served with bread or biscuits, obtained first preference in 764 families and second preference in only 177 families. Cooked cheese obtained first preference in 505 families, second preference in 704 families and third preference in 247 families. Cheese with salads or sandwiches obtained first preference in only 37 families, second preference in 78 families and third preference in 90 families (table 23).

Eating cheese with the dessert is a practice often recommended by those who would like to see the consumption of cheese increased. Judging by the figures obtained in the survey, this practice is not very popular. Only 19

families gave first preference to Canadian cheddar cheese served with the dessert, 68 and 71 gave it second and third place, respectively, and as many as 100 gave it only fourth ranking.

As might be expected, the consumption of Canadian cheddar cheese between meals was not favoured so much as its consumption in other ways.

TABLE 23.—Uses of Canadian Cheddar Cheese by Order of Importance in Some Canadian Households, 1935

Order of importance	Number of families which have preference for:				
	Cheese in slices	Cheese cooked	Cheese with salads or sandwiches	Cheese with dessert	Cheese between meals
1.....	764	505	37	19	9
2.....	177	704	78	68	25
3.....	48	247	90	71	35
4.....	6	42	13	100	37
5.....		4	1	6	15

Processed Cheese.—A study of table 24 would indicate that processed cheese was liked best when used with salads and sandwiches or in slices. In 658 households processed cheese in slices was given preference and in 156 families it was given second preference. In a relatively large number of families processed cheese used with salads and sandwiches was given first, second and third preference.

TABLE 24.—Uses of Processed Cheese by Order of Importance in Some Canadian Households, 1935

Importance	Number of families which have preference for:				
	Cheese in slices	Cheese cooked	Cheese with salads or sandwiches	Cheese with dessert	Cheese between meals
1.....	658	95	219	25	60
2.....	156	159	257	41	149
3.....	65	48	218	68	166
4.....	12	13	27	62	84
5.....	2	4	7	6	46
Total.....	893	319	728	202	505

Canadian Cheddar and Processed Cheese.—In some families, Canadian cheddar and processed cheese were used indiscriminately and no particular preference was given to one kind or the other. In those families, cooked cheese was preferred to cheese served in any other way. As many as 505 families gave first preference to cooked cheese and 704 gave it second preference (table 25).

TABLE 25.—Uses of Canadian Cheddar and Processed Cheese by People Using These Two Kinds of Cheese Indiscriminately in Some Canadian Households, Classified by Order of Importance, 1935

Order of Importance	Number of families which have preference for:				
	Cheese in slices	Cheese cooked	Cheese with salads or sandwiches	Cheese with dessert	Cheese between meals
1.....	764	505	37	19	9
2.....	177	704	78	68	25
3.....	48	247	90	71	35
4.....	6	42	13	100	37
5.....		4	1	6	15

MEALS AT WHICH CHEESE WAS SERVED AND METHODS OF SERVING

Cheese in both its uncooked and cooked form was most popular as a luncheon or supper food. In 2,330 families where it was served in slices along with bread or biscuits, 49 per cent of the housewives used it at the lunch meal, and nearly three-quarters of the 1,870 housewives who cooked it also served it as a luncheon dish. Served with salads and sandwiches, it was most frequently found at the lunch hour.

It was not used very extensively as a main dinner dish, either at noon or the evening, according to when the main meal was served, but in families where it was, it was served in a cooked form more often than sliced. The use of cheese with the dessert was reported by only 562 families, and two-thirds of these served it with dinner.

TABLE 26.—Meals at which Cheese in Different Forms Was Used by Some Families in Certain Urban and Rural Localities of Canada, 1935

Meals	Sliced	Cooked	With salads and sandwiches	With the dessert
	%	%	%	%
Breakfast.....	5.0	1.3	0.5	.....
Lunch or supper.....	49.0	74.5	91.0	17.3
*Dinner.....	5.7	12.8	1.7	65.5
Breakfast and lunch.....	11.7	1.9	1.1	0.3
Lunch and dinner.....	19.5	8.6	3.0	15.3
Supper and dinner.....	8.3	0.7	2.6	1.4
Others.....	0.8	0.2	0.1	0.2
Number of families reporting.....	2,330	1,870	1,006	562

* Main meal, served either at noon or the evening.

Sliced.—The consumption of Canadian cheddar cheese in slices at lunch was reported by 524 housewives and processed cheese was used in slices at the same meal by 353 housewives (table 27). Canadian cheddar cheese was also served at both lunch and dinner in 210 households and processed cheese was served at both lunch and dinner in 132 households.

TABLE 27.—Meals at Which Cheese in Slices Was Used by Some Families in Certain Localities of Canada 1935

Meals	Numbers of families using various kinds of Cheese		
	Canadian cheddar cheese	Processed cheese	Canadian cheddar and processed cheese
Lunch or supper.....	524	353	258
Lunch and dinner.....	210	132	109
Breakfast and lunch.....	83	164	26
Supper and dinner.....	69	71	51
Dinner.....	59	52	22
Other meals.....	22	101	12

Cooked.—Cooked cheese was used at lunch or supper more than at any other meal. In 1,158 households, the housewives reported the use of cooked Canadian cheddar cheese at lunch, and in 176 households they reported the use

of cooked processed cheese at that same meal. In only 146 households was the use of cooked Canadian cheddar cheese reported at dinner. The use of cooked processed cheese at dinner was reported in 82 families (table 28).

TABLE 28.—Meals at Which Cooked Cheese Was Used by Some Families in Certain Localities in Canada, 1935

Meals	Kinds of Cheese		
	Canadian Cheddar cheese	Processed cheese	Canadian Cheddar and processed cheese
Lunch or supper.....	1,158	176	55
Dinner.....	146	82	10
Lunch and dinner.....	124	26	12
Other meals.....	46	24	5

With Salads and Sandwiches.—Cheese was used with salads and sandwiches at lunch or supper more than at any other meal, and considerably more families used processed cheese for this purpose than the cheddar variety. Table 29 shows that processed cheese was used at lunch in 648 households, and at other meals by only 55 families. Canadian cheddar cheese was used with salads and sandwiches at lunch in 185 households and at other meals in only 18 families.

TABLE 29.—Meals at Which Cheese Was Used with Salads and Sandwiches by Some Families in Certain Localities of Canada, 1935

Meals	Kinds of Cheese		
	Canadian Cheddar cheese	Processed cheese	Canadian Cheddar and processed cheese
Lunch and supper.....	185	648	125
All other meals.....	18	55	16

With the Dessert.—Canadian cheddar and processed cheese were used with the dessert at dinner more than at any other meal. Of the 3,215 families interviewed, 364 reported the use of cheese with the dessert at dinner, 97 reported its use at lunch, and 86 reported its use at both lunch and dinner (table 30).

TABLE 30.—Meals at Which Cheese Was Used with the Dessert by Some Families in Certain Localities of Canada, 1935

Meals	Number of families using various kinds of cheese			
	Canadian cheddar cheese	Processed cheese	Canadian cheddar and processed cheese	Total
Dinner.....	191	114	59	364
Lunch and supper.....	34	44	19	97
Lunch and dinner.....	31	31	24	86
Other meals.....	1	8	6	15
Total.....	257	197	108	562

MISCELLANEOUS

A considerable effort is being made to sell cheese in packages that will appeal to the consumer. This, however, applies more to processed than to cheddar cheese. About 17 per cent of the housewives interviewed said they would increase their purchases of cheddar cheese if it were sold in handier packages; i.e., packages of convenient size that would ensure better protection of the cheese (table 31).

TABLE 31.—Number and Proportion of Families Which Would or Would Not Buy More Canadian Cheddar Cheese under Certain Conditions, 2,662 Families in Certain Localities of Canada, 1935

Factors affecting possible variation in the purchase of cheese	Families which would buy more cheese		Families which would not buy more cheese		Families which did not give an answer	
	No.	%	No.	%	No.	%
Lower price for cheese.....	807	25.1	2,317	72.1	89	2.8
Cheese keeping better.....	665	20.7	2,454	76.4	94	2.9
Better knowledge of how to serve cheese.....	625	19.5	2,493	77.6	95	2.6
More uniform quality of cheese.....	555	17.3	2,569	79.9	89	2.8
Cheese sold in handier packages.....	545	17.0	2,574	80.1	94	2.9
Strong cheese of good quality more easily obtainable.....	435	13.5	2,688	83.7	90	2.8

The housewives were also asked if they would buy more cheese if it kept better. About 21 per cent of them answered in the affirmative.

Approximately 25 per cent of the housewives interviewed were of the opinion that a decrease in the price of cheese would result in larger purchases. Strong Canadian cheddar cheese of good quality is not easily obtainable in some localities. If it were, a larger volume of that particular cheese might be bought. This statement is based on the fact that 13.5 per cent of the housewives interviewed shared that opinion. A more uniform quality of cheese would also make for larger purchases. Some 17 per cent of the housewives agreed that, since the cheese they bought might not be of standard or uniform quality, they were inclined to buy a smaller quantity or none at all.

Further dissemination of information on the preparation of cheese dishes would likely increase sales, as almost 20 per cent of the housewives interviewed stated they would buy more cheese if they knew more ways in which to serve it. It is often claimed that one of the reasons for the relatively low consumption of cheese is the lack of care and proper handling of the product in the retail stores. This point was inquired into by the enumerators who visited some retail stores or other merchandising agencies selling cheese. No figures as to the proportion of establishments where cheese was not handled properly were secured, but generally speaking, only a minority of the cheese distributors visited were careless in this respect or failed to give special attention to the handling of cheese in the proper manner.

The housewives too, were asked about their methods of keeping cheese in the home. Of the 3,213 housewives interviewed, only 2,229 gave information on the subject. It would seem that housewives generally took proper care of cheese since in 793 cases it was kept in the refrigerator, in 479 cases it was kept in the basement, in 354 cases in a cupboard, in 339 cases in wax, lead, or cloth paper, in 109 cases in a cheese dish and in 11 other cases in various other ways.

It is generally admitted that the best place to store cheese in the home is in the refrigerator or a cool cupboard. As many as 51 per cent of the housewives referred to above kept cheese in such places. The other housewives had different methods but all these various methods lead one to believe that most housewives knew that cheese must be kept in a cool dry place so as to preserve the fat in the cheese. They also knew that by covering cheese or wrapping it in wax or some kind of paper they would preserve its flavour and texture.

DIETETIC VALUE

In each household the opinion of the housewife was sought as to the value of cheese as a food and also as to its cost in relation to other foods. There was some considerable diversity of opinion on at least two of the questions asked, as can be seen in table 32. Most housewives were agreed that cheese was high in food value, but about a quarter of those giving an answer considered it was expensive in relation to other foods. A third of those answering the question on digestibility considered it hard to digest and 75 per cent of the housewives considered it a good food for children, provided it was used in reasonable quantities.

TABLE 32.—Answers to a Few Questions Concerning Some of the Characteristics of Cheese, by 3,213 Housewives in Certain Localities of Canada, 1935

Do you consider cheese:	Yes	No	No answer
High in food value.....	2,592	347	274
Expensive.....	774	2,241	198
Hard to digest.....	1,015	1,977	221
Good for children.....	1,808	608	797

SUMMARY

The per capita consumption of cheese by 3,213 families of which 2,602 families were in cities, 251 in villages and 360 in farm areas, was 6.7 pounds per year. The average annual consumption per family was 31.4 pounds. These consumption figures include Canadian cheddar, cottage, cream, processed and imported cheese, all of which vary in moisture content. When the consumption of these varieties was reduced to the same moisture content as Canadian cheddar cheese the annual per capita consumption was 6.0 pounds and the average annual consumption by each family, 28.3 pounds.

The annual per capita consumption was 2.4 pounds for processed cheese, 1.9 pounds for mild Canadian cheddar cheese, 1.4 pounds for strong Canadian cheddar cheese, 0.9 pound for cottage and cream cheese and only 0.1 pound for imported cheese.

The yearly per capita consumption of cheese was higher in the rural cheese producing areas than in the other farm areas, villages or cities included in the survey. It was lowest in those farm areas where production of cheese is negligible.

An increase in the annual family income was accompanied by an increase in the yearly consumption of cheese in the family. It was also accompanied by an increase in the per capita consumption of cheese until an annual family income of \$4,000 had been reached.

People of Jewish and Ukrainian origins were among the highest per capita consumers of cheese; people of French-Canadian origin were among the lowest. Those of Canadian or British origin were the highest per capita consumers of Canadian cheddar cheese.

A marked decrease in the annual per capita consumption of cheese accompanied an increase in the number of persons per family.

About 11 per cent of the families visited did not use cheese of any kind. About 72 per cent of them did not report any consumption of cottage and cream cheese. Nearly a third did not eat Canadian cheddar cheese, and processed cheese was not used in 36 per cent of the homes.

The per capita consumption of cheese was only slightly higher in the cold months than in the summer months.

About half of the families in all localities visited bought Canadian cheddar or processed cheese regularly.

Cheese was not bought in large quantities at a time. The most usual purchase was either half or one pound. Small purchases were no doubt made to ensure original freshness and to obviate the chance of larger quantities drying out. Processed cheese was almost invariably bought by the single package.

Only 23 per cent of the housewives reported that cheese or cheese dishes were served in place of meat.

About 17 per cent of the housewives questioned said they would buy more Canadian cheddar cheese if it were packed in convenient sizes and wrapped in a manner that would ensure better protection of the cheese.

A quarter of the housewives were of the opinion that a decrease in the price of cheese would result in larger purchases.

APPENDIX

Questionnaire Used by Enumerators

1 Record No..... Date..... Enumerator.....
 2 City, Town or P. O..... Street..... Province.....
 3 Number of persons in the family.....
 4 Nationality of head of family.....
 5 Occupation of head of family.....
 6 Annual family income.....
 7 Do you buy Canadian (cheddar) cheese regularly— Yes..... No.....
 8 Do you buy packaged or processed cheese regularly— Yes..... No.....
 9 Do you buy cottage or cream cheese regularly— Yes..... No.....
 10 How much packaged or processed cheese do you buy at one time..... Packages
 11 How much Canadian (cheddar) cheese do you buy at one time..... lbs.
 12 What does cheese take the place of in your menu: Nothing..... Meat.....
 Eggs..... Butter..... Other.....
 13 How much cheese do you purchase per month:

	June, July, August	Balance of year	Total annual amount
(a) Mild (new) Canadian cheddar, lb.
(b) Strong (old) Canadian cheddar, lb.
(c) Cottage and cream, lb.
(d) Processed or packaged (packages, oz.)
(e) Imported (Roquefort, Limburger, Swiss, etc.), lb.

14. What kinds of cheese do members of your family prefer: (number in order of importance)

Women	Men	Children
-------	-----	----------

(a) Mild Canadian cheddar
 (b) Strong Canadian cheddar
 (c) Cottage and cream, lb.
 (d) Processed or packaged
 (e) Imported (give kind)
 (f) Don't like cheese of any kind

15. Why do you use more processed than Canadian cheddar cheese:

16. Why do you use more Canadian cheddar than processed cheese:

17. Why do you not buy more strong or old Canadian cheddar cheese:

18. Would you buy more Canadian cheddar cheese:
 (a) If it were cheaper— Yes..... No.....
 (b) If you could obtain strong cheese of good quality— Yes..... No.....
 (c) If it were of more uniform quality— Yes..... No.....
 (d) If it were in handier shapes and packages— Yes..... No.....
 (e) If it would keep better— Yes..... No.....
 (f) If you knew more ways to serve it— Yes..... No.....

19. Do you inquire the price before buying Canadian cheddar cheese—Yes..... No.....
 20. How do you use cheese in the home (number in order of importance) and give meal at which served:

	Importance	Canadian or Processed	What meal
(a) Cooked cheese dishes
(b) Slices or sliced on the table
(c) Sandwiches and salads
(d) As a whole or part of dessert
(e) Between regular meals

21. How do you store cheese in the house:

22. Compared with other foods, do you consider cheese to be:
 (a) High in food value— Yes..... No.....
 (b) An expensive food— Yes..... No.....
 (c) Hard to digest— Yes..... No.....
 (d) Not good for children— Yes..... No.....

23. When you buy Canadian cheddar cheese, what do you ask for
 Canadian..... Cheddar..... Factory..... Old..... New.....
 Mild..... Strong..... Good..... Best..... or just cheese.....

24. Do you prefer white Canadian cheese..... or coloured.....

25. From what type of retailer do you buy most of your cheese:
 Canadian Processed Cottage Imported
 cheddar or packaged or cream

Independent grocery.. . . . .	.....	.....	.....	.....
Chain grocery.. . . . .	.....	.....	.....	.....
Confectionery store..
Meat shop..
Dairy..
Cheese factory..
Department store..
Wholesale grocer..

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